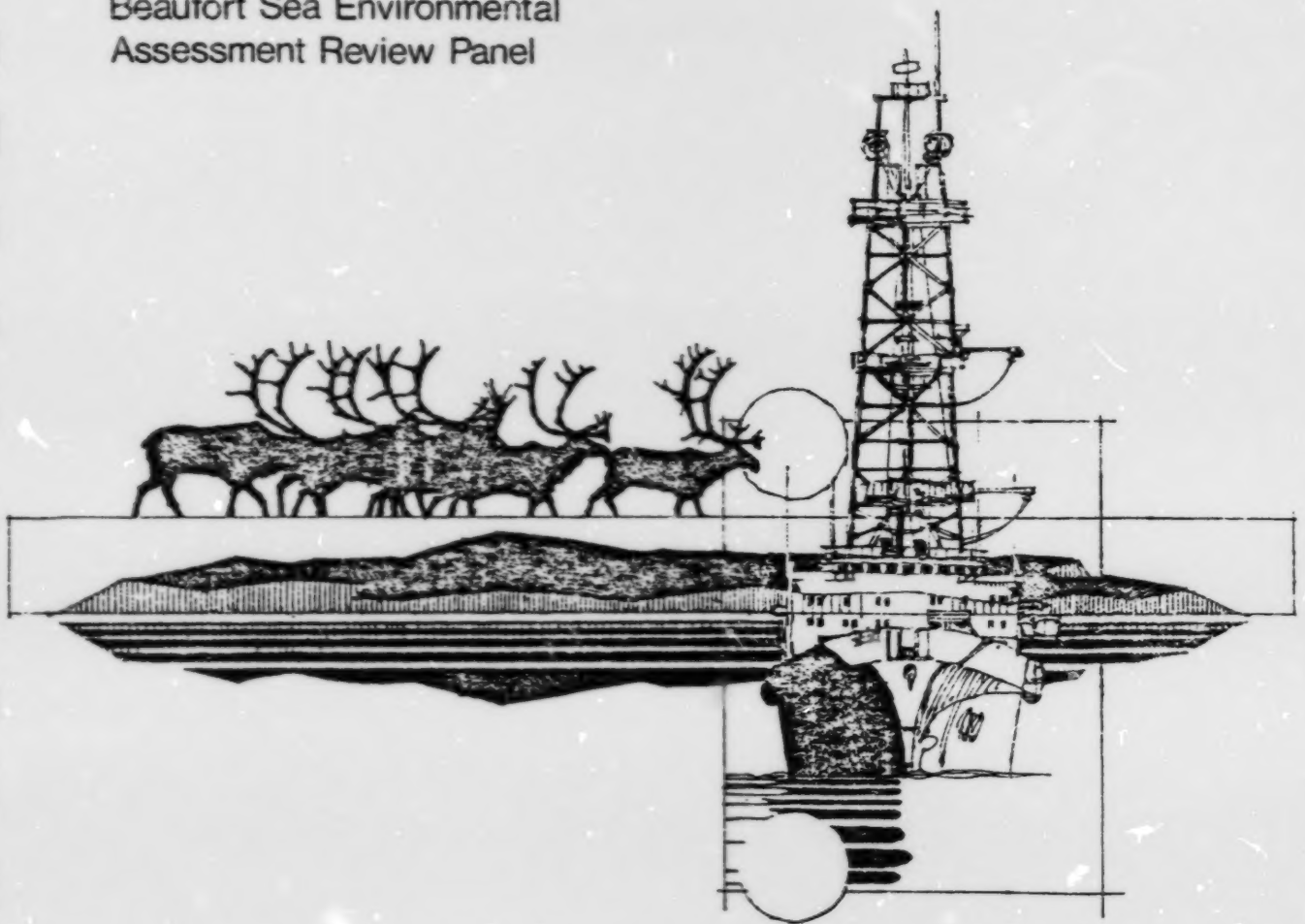


GOVERNMENT of YUKON POSITION on BEAUFORT DEVELOPMENT PROPOSALS

Submission To
Beaufort Sea Environmental
Assessment Review Panel



Yukon

August, 1982

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Summary

Yukoners have been involved in Beaufort Sea activities since the whaling expeditions of the early 1900s. They have been involved in hydrocarbon transportation since the building of the Canol pipeline, and in exploration and drilling since the push into Eagle Plains in the 1950s and the drive across Northern Yukon in the late 1960s. Yukoners come to the present phase of Beaufort development then, with considerable experience in hydrocarbon activities and with a sense that they have a strong role to play in the latest series of work opportunities in the Beaufort.

The Government of Yukon, holding the political and legislative mandate for socio-economic affairs in Yukon, is pursuing employment, training and business opportunities for Yukoners who wish to participate in Beaufort hydrocarbon activities. It argues that Yukoners, as northerners, will bear many of the direct and indirect social costs of oil and gas developments on their doorstep and Yukoners, consequently, should have an equitable share in these developments. The Government of Yukon is committed to working cooperatively with industry, the federal government and GNWT toward ensuring the participation of Yukoners in Beaufort work and toward the smooth integration of much of the growing

Beaufort workforce into the Yukon population. The Government of Yukon's work in this regard is conducted within the framework of its move toward full political responsibility and is done with the recognition of the separate objectives of its NWT neighbours regarding their involvement in Beaufort activities.

The Government of Yukon has the mandate for wildlife management and protection in Yukon. It is aware that development in Northern Yukon, whether this development involves periodic activities such as quarrying and pipeline construction, or long term activities such as the operation of shore bases, harbour facilities and connector roads, will place considerable stress on the environment and the wildlife species dependent on the environment. The Government of Yukon is resolved to manage development in Northern Yukon in a manner that will minimize negative impacts on the area. It will require additional wildlife survey data in order to develop effective management regimes. However, it has already developed a process for formulating and implementing such management plans. This process is described specifically in the Northern Yukon Resource Management Model and more generally in Land: A Yukon Resource.

The Government of Yukon looks forward to the opportuni-

ties that Beaufort development will offer to the north and to Canada in general. It is prepared and anxious to participate fully in the complex planning required to achieve the timely and carefully managed production of Beaufort oil and gas. It supports the Beaufort Environmental Assessment Review Process as a critical step in the move toward the full development of the Beaufort Sea's important hydrocarbon resources.

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INTRODUCTION

In 1980, in response to competing proposals for the disposition and use of land in Northern Yukon, the Government of Yukon presented its position on the management of Northern Yukon resources. This initial position, which recognized the importance of Yukon coastal sites to off-shore development in the Beaufort, has been elaborated and expanded in a series of policy statements on Yukon's expectations regarding its involvement in Beaufort Sea development.

The Government of Yukon's position on Beaufort Sea development is an evolving one, responsive to changes in industry's plans and to changes in the social and political climate surrounding hydrocarbon development. However, while Yukon's position on Beaufort oil and gas activities has the flexibility to accommodate changing development plans, it is grounded firmly on a set of strongly held principles. The Government of Yukon, in supporting Beaufort development activities, is committed to the preservation of Yukon's wildlife and environment. It is resolved to ensure that Yukoners obtain equitable business, employment and training opportunities so that resident Yukoners' participation in

Beaufort work can contribute to the social and economic development of Yukon. The Government of Yukon, too, holds that its involvement in Beaufort development will be in a manner that will contribute to the political evolution of the territory, while preserving the ability of native peoples to engage in their traditional lifestyles.

These principles are restated in a number of forms throughout this paper. The present document is essentially a reiteration of current Yukon positions on Beaufort development. It has been developed specifically in response to the Federal Environmental Review Office's call for government position papers on the Beaufort Sea Environmental Impact Statement. The paper reflects the input of several Government of Yukon departments and branches and it is intended to reflect the government's objectives and goals regarding Beaufort development rather than to describe specific programmes and particular courses of action.

Following a brief overview of development proposals from Yukon's perspective, the paper outlines some contemporary and historic factors related to Yukon's involvement with the Beaufort. It sketches the mandate under which the Government of Yukon conducts its work on Beaufort development. It lists major socio-economic and environmental positions,

describes Yukon's planning approach to Beaufort development, and it summarizes current and anticipated activities related to Beaufort hydrocarbon development plans.

Many of the sections in this paper cover the same positions and perspectives in different ways. To some extent, then, there is built-in redundancy in the document. This is not unintentional, however. Our aim is to emphasize as much as possible that Yukon touches the Beaufort. Its people have had longstanding links with the Beaufort. As a distinct northern population pursuing economic and political objectives that encompass traditional lifestyles and carefully managed resource extraction, Yukoners are prepared to participate in Beaufort development and are anxious to do so in a manner that does not compromise the quality of life and the quality of environment that is special to Yukon.

2.0 DEVELOPMENT IN THE BEAUFORT SEA: THE YUKON PERSPECTIVE

Yukoners have been living with oil and gas exploration on the north coast and in the Beaufort Sea for over a dozen years. People from Old Crow have worked periodically on seasonal drill rigs since before the arrival of the Canmar fleet off the Tuktoyaktuk Peninsula and long before the regular appearance of Esso's Issungnak on prime time TV advertisements. A series of dry holes was strung across Yukon's coastal plain north of the British Mountains prior to Justice Berger's inquiry on the Mackenzie Valley pipeline. Herschel Island, during this same period, underwent a third wave of activity, the most recent one involving hydrocarbon resources rather than whaling and fur trading.

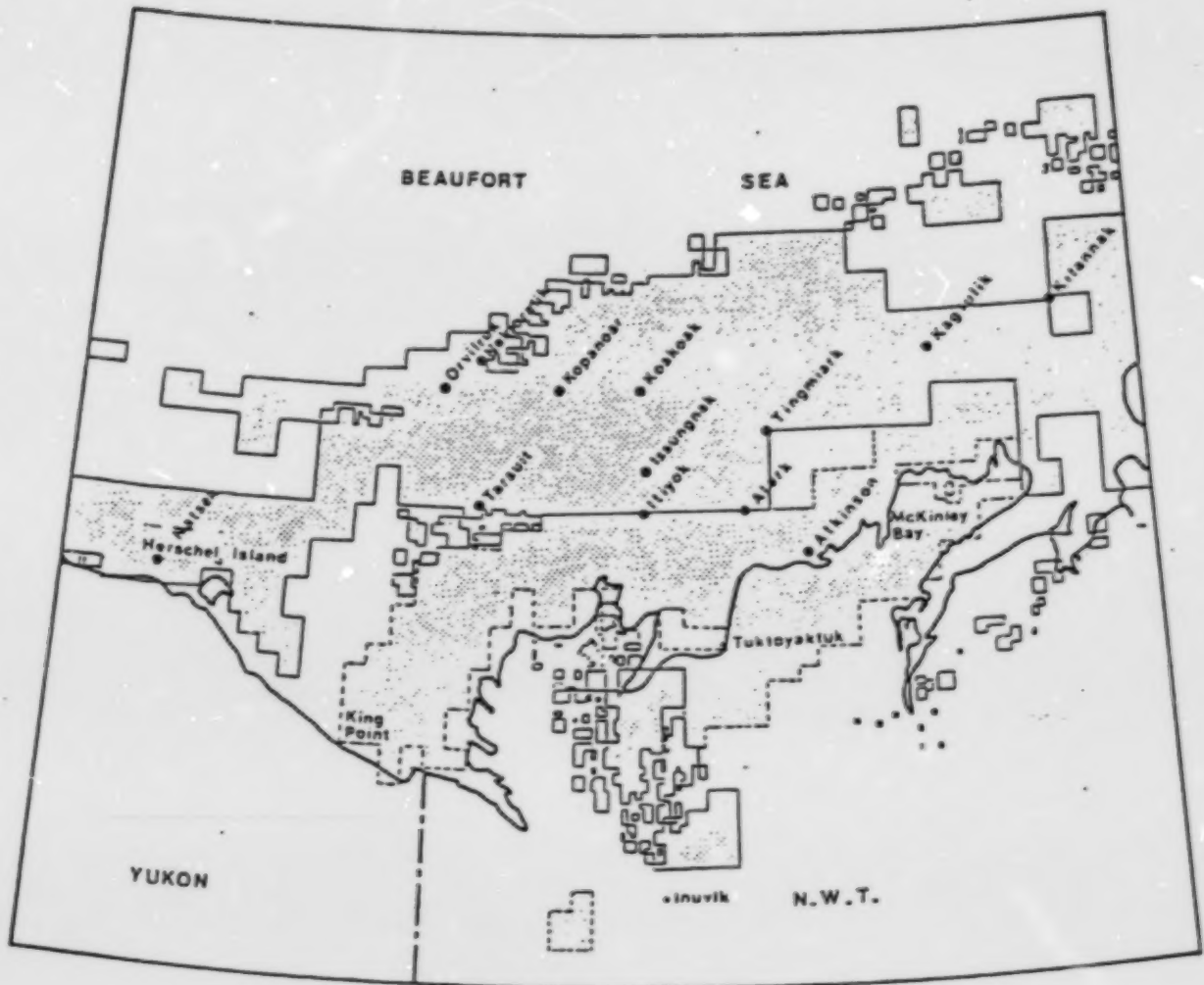
The same decade and a half of exploration has seen the Dempster highway being pushed northward and the airlinks between Yukon centres and the Mackenzie Delta being consolidated.

Yukon, then, faces the current transitional period between exploration in the Beaufort and the establishment of production facilities with some experience in hydrocarbon activities, with some involvement in those activities, and with the strong sense that as a region contiguous to

Beaufort it has a key role to play in future oil and gas work in the area.

Yukon's expectations for the Beaufort have been encouraged by industry's analysis of the potential in the more than forty identified subsea geological structures. They have been encouraged, too, by the level of activity in the Beaufort in recent years, and by the promising test results from wells such as Tarsiut N-44.

In looking to industry's plans for production facilities in the Beaufort area the Government of Yukon has found it convenient to employ two broad and overlapping frameworks, one related to environmental concerns and the other related to socio-economic matters. The environmental framework serves to concentrate attention on the effects of development on northern Yukon, particularly that area north of the British Mountains and along the Dempster Corridor. The socio-economic framework broadens the focus to include the impact of Beaufort development on southern Yukon population centres. The Government of Yukon employs these dual planning perspectives when reviewing and participating in ongoing work on Beaufort hydrocarbons.



LEGEND

LEASE BLOCKS

— DOMES OR GULF PRINCIPAL LEASE HOLDER

- - - ESSO PRINCIPAL LEASE HOLDER

2.1 Development Proposals

Until the potential of the recently discovered offshore fields has been fully delineated and until the time frame for Beaufort development has been defined, the Government of Yukon, like all jurisdictions and agencies, is in a position of reacting to conceptual plans that are dynamic and changeable. Thus Yukon's own planning efforts for Beaufort development must, of necessity, be based on its own interpretation of what may happen on the northern coast and in the waters adjacent to the coastal plain and Herschel Island.

Current proposals range from optimistic production projections of over a million barrels of oil per day by 1995 to more cautious forecasts of over half a million barrels per day by that time. In either case, the rate of oil flow necessary for economically viable production will entail the development of a number of deep and shallow water fields with several collector systems. The nature of the terminal points for these collector systems will depend to a large extent on the mode of transportation for Beaufort oil.

Pipeline transmission will involve oil coming ashore

at a point such as Richards Island for movement south through the Mackenzie valley or west or southwest through other shipment corridors. Tanker traffic, if established, might be loaded at offshore Arctic Production and Loading Atolls (APLAs). The number of atolls built will depend on the order in which fields are developed. (Oil could be piped from Koakoak to an existing APLA at Tarsiut, for instance.)

At this stage of planning, the question of whether to construct pipeline or tanker delivery systems seems less of an either/or one and more a matter of what scale for each mode. Assuming, then, that both tankers and pipelines may be operating in the Beaufort region within the next decade (1982-1992), the Government of Yukon has identified a number of environmental and socio-economic factors related to hydrocarbon development that will affect Yukon in the pre-production and production stages of activity.

2.2 Development Options Having Environmental Implications

Drilling and developing the major offshore oil bearing structures in the Beaufort Sea will involve the establishment of a number of shore bases to provide support services to the drill ships and artificial islands. The McKinley

Bay and Tuktoyaktuk facilities presently serve this function for the major operators. However, as exploration expands throughout the Beaufort area other shore locations will be identified as being desirable base sites. One or more of these will in all likelihood be in Yukon. The development of such sites will entail the identification of surface and air transportation corridors and the location and use of borrow pits for rock and granular material.

Barite mining is an additional activity that may occur in Yukon and that may induce some exploration work to delineate various commercially viable deposits.

The construction of shore bases, the identification of transportation corridors, quarrying and barite mining will all have environmental impacts on Yukon.

The possibility that an increased level of hydrocarbon activity in northern Yukon will stimulate further exploration for ore deposits also must be considered as an indirect spin-off of oil and gas development.

2.2.1 Shore base sites

A number of potential shore sites on the Yukon coast have been identified as acceptable locations for service

and supply bases and as over-wintering harbours for the Beaufort fleet. Pauline Cove on Herschel Island has been used as an off-loading area for the Tarsiut caissons and as a winter harbour for Dome's drill ships. Roland Bay, King Point and Stokes Point have been studied as possible deep draft harbour sites and supply base locations. As yet unidentified sites on the Yukon coast could also be required for pumping stations and pipeline right of ways.

The activities that have ensued already at Pauline Cove mark it as a potential staging facility and supply base. With a water depth of 10 meters it could also serve as a shallow to medium draft harbour. However, the historic sites in the Pauline Cove area make it a particularly sensitive location and Herschel Island's designation as a territorial park under the proposed Northern Yukon Resource Management Model (1980) would have a bearing on any review of a harbour or supply base development plan.

Of the Roland Bay, Stokes Point and King Point sites, Stokes Point and King Point are the most likely development areas.

Stokes Point lies west of Babage Bight at approximately 138° 45' W and 69° 20' N. An area with low relief facing

roughly north and north east, it is the site of an abandoned DEW line station and an unmaintained airstrip. It has the advantages of having deep water relatively close inshore and of having been the location of previous human activity.

King Point lies approximately 137° 56' W and 69° 07' N on the coastal strip that runs from Kay Point to Shingle Point. Encompassing a spit that protects a lagoon from open water, it faces generally in a north easterly direction. The King Point area has deep water close to shore and, as a result, has been discussed frequently as the site of a deep draft harbour, a supply base, a transfer port, an anchorage and year round fueling facility. The wetlands on King Plains provide prime habitat for waterfowl and the significance of this locale would be of primary importance in any impact assessment of development on King Point.

All of the potential harbour sites in northern Yukon have been used traditionally by native peoples resident in the Beaufort Sea region.

2.2.2 Transportation corridors

Two potential pipeline corridors through Northern Yukon, running from the Mackenzie Delta to Alaska, have been identified and described in Justice Berger's 1977 Report of the

Mackenzie Valley Pipeline Inquiry. One of these routes follows the Arctic coastline and cuts across waterfowl habitat, the calving grounds of the Porcupine Caribou Herd, and an area rich in historic resources. The other route follows an interior alignment across difficult terrain from the Fort McPherson area along the Porcupine River and south of the Brooks Range to link up with the Alaskan pipeline corridor.

A third corridor follows the Dempster Highway route and has been studied extensively as the Phase III portion of the Alaska Highway Gas Pipeline Project.

All of these corridors can be viewed as general energy transportation routes along which both gas and oil pipelines could be laid. In terms of preliminary appraisal work, more research has been conducted on the coastal and Dempster corridors than on the northern trans Yukon interior route. The probability that one or more of these corridors will be developed during the Beaufort production cycle is difficult to evaluate at this time. Factors such as the timing and rate of production, and the assignment of Beaufort resources to the Canadian or export markets will all have a bearing on this issue. Any long range planning and preparation for Beaufort Sea development will require

a consideration of these various options, however.

The construction of coastal supply bases and the development of energy corridors in northern Yukon will require the establishment of temporary resupply roads. Such activities may also involve the construction of permanent road links between the Dempster Highway and Yukon coast. For instance, the Bell and the Blow River valleys have been suggested as forming one possible route between the Dempster and the King Point area. No engineering studies of this or other options have been conducted to date, however.

The development of harbour facilities on the coast could require a haulage road between the port site and a source of rock. The Mt. Sedgwick region has been identified as a possible quarrying area. A road to this location from a site such as Stokes Point or King Point would involve crossing wet, permafrost permeated terrain that is on the migration route of the Porcupine Caribou Herd and that constitutes prime waterfowl habitat. Other roads might also be built for gravel hauls.

Supply bases and harbour facilities on Yukon's north coast will be resupplied and serviced by air as well as by road and/or sea.

Landing facilities will have to be developed or, as in the case of Stokes Point, upgraded. Regular air traffic in and out of an airstrip may affect the behaviour of the bird species located in the area.

Sea routes will serve as the third element in the pattern of land, water and air transportation corridors associated with oil and gas development. The advent of tanker traffic and ocean resupply will require a navigation infrastructure and a navigation management plan. While this lies outside of the area of responsibility of the Government of Yukon, the issue of ship movement off the Yukon coast is one of major concern and interest.

2.2.3 Quarrying

Any site development on Yukon's north coast will require substantial quantities of gravel. Harbour construction will require rock for breakwaters and general rip rap. Plans to construct a base or a harbour facility in northern Yukon will likely entail a search for onshore and offshore gravel deposits and further work on the location of suitable rock materials and on the logistics of moving those materials.

The Mount Sedgwick area was studied as a source of

rock in the early 1970's and it is still referred to as being a likely quarrying site.

2.2.4 Mining

Barite, as a mineral used in drilling mud, is an extremely important substance in the oil and gas industry. A usable deposit of barite has been located north of Ross River close to the Canol Road. Other viable deposits may lie close to the Dempster Highway.

All of these deposits have yet to be fully delineated, however they appear to be attractive enough that further work on them is likely. It is not unreasonable to assume that with stepped up exploration and production programmes barite may be mined and processed in Yukon for shipment to the Beaufort drilling operations. Indeed, Gulf Canada Resources Incorporated is actively pursuing an agreement leading to the development of a Yukon deposit in the near future.

2.2.5 Induced activities

The Dempster Highway has served as a contingency route for Beaufort resupply since its opening. Indeed, the volume of trucking on the road has grown steadily year by year. While the Dempster is unlikely to become a major route for the movement of bulk drilling materials, its use as a secondary supply route is likely to increase

with the level of operations in the Beaufort.

The use of the Dempster will increase, too, as a result of the resupply demands of businesses and companies servicing the enlarged population that is projected for the Mackenzie Delta area. There will be additional private traffic also.

The improved transportation, communications and service facilities in the northern Yukon and Mackenzie Delta area due to oil and gas developments may ultimately induce increased mineral exploration and research on the viability of moving ore concentrates out of northern Yukon through Beaufort ports.

2.2.6 Summary of development possibilities having environmental implications

The transition of Beaufort Sea hydrocarbon activities from the exploration to the pre-production and production phases will involve the development of shore bases, harbour facilities and the transportation infrastructure to support those facilities. It could also involve the construction of pipelines and lead indirectly to increased exploration and mining for usable sources of barite.

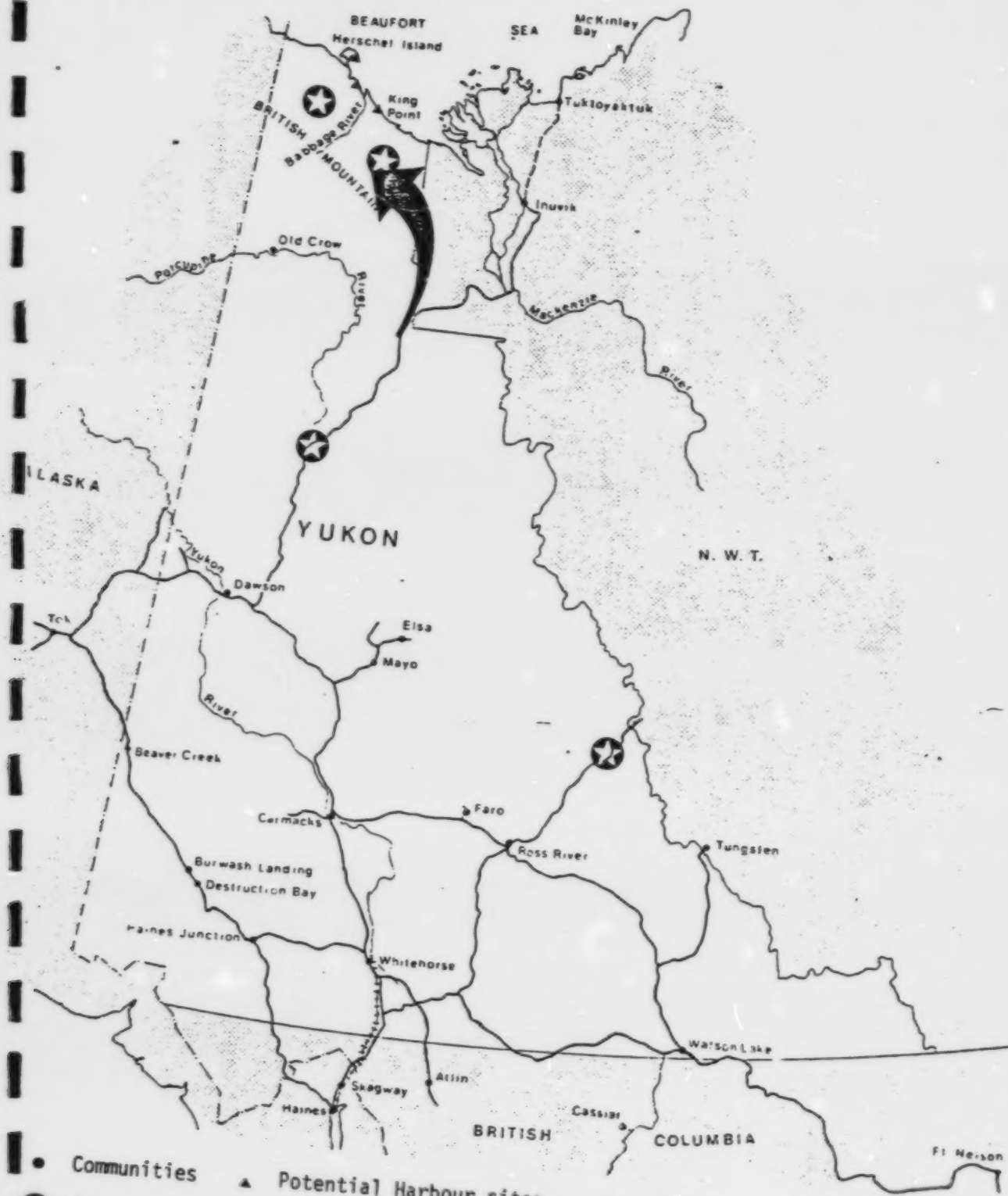
As a result, in studying the environmental implications

of Beaufort Sea oil and gas development, the Government of Yukon is anticipating proposals for the construction of shore bases, a harbour site and permanent and temporary roads in the coastal plain region. It is anticipating increased road traffic on the Dempster, increased air traffic across northern Yukon, increased levels of exploration for barite, and the possibility of rock and gravel quarrying and barite mining.

The range of these activities will extend across the coastal plain and northern slopes of the British Mountains, through a transportation corridor to the Dempster Highway, and along the Dempster and Campbell Highways to the North Canal Road area near Ross River.

2.3 Socio-economic implications of development options

Business opportunities, employment opportunities, and the training opportunities necessary to avail of business and employment openings are three major areas of interest to the Government of Yukon in its attempts to ensure that Yukoners obtain optimal benefits from Beaufort Sea hydrocarbon development. Other socio-economic factors that will be of concern to Yukon as exploration and production activities intensify include housing and infrastructure requirements,



- Communities
- ▲ Potential Harbour sites
- ★ Areas of potential environmental impact
- ➔ Potential access corridor
- Roads

project information dissemination, and the implications for government services of an increased and widely dispersed workforce.

Issues requiring immediate consideration and resolution include resource revenue sharing, worker residency, and the use of Beaufort energy in Yukon.

2.3.1 Business opportunities

The opening of the Dempster Highway has provided Yukon business people with a land link to the Mackenzie Delta. They have capitalized on this and on scheduled air services to engage in a variety of business ventures in the Beaufort oil patch. Heavy equipment, produce and fabricated containers are among the various supplies that have been provided by Yukon companies to the oil and gas industry. Truck and air charter hauls have been made by Yukon carriers. An even broader selection of services and products available from Yukon businesses is reflected in the large number of Yukon listings in Dome's and other operators' business inventories.

As Yukon business people have indicated in several oil and gas workshops, they feel they can contribute sig-

nificantly to developments in the Beaufort. They are looking to expand the amount of business carried out with the major exploration and development companies in the immediate and foreseeable future.

2.3.2 Employment

Yukoners have had working experience with the oil and gas industry since the exploration drives into the Eagle Plains area in the 1950s. Consequently, the increased level of activity predicted for the Beaufort is seen to provide further opportunities in a field that is already familiar to many long time residents. Indeed, there are several indications that Yukoners are anxious to obtain employment in the oil and gas arena in general, and in the Beaufort in particular. For instance, CEIC in Whitehorse and the Government of Yukon receive a regular stream of inquiries about the availability of work in the Beaufort. Community information tours by some of the major companies have generated substantial interest, and Foothills Pipelines (South Yukon) Ltd. has amassed an employment interest inventory of approximately 500 names for pipeline construction work. The nature of work in the Beaufort oil patch and the conditions of work in work camps are acceptable to and offer no deterrents to the Yukon workforce.

2.3.3 Training

Several creative federal, territorial and industry sponsored training programmes have been established to train residents of the NWT for work with the major oil companies. On-the-job training has been used as a complement to formal training and has given people from across the north the opportunity to work on the drilling rigs and with the support services in the Beaufort. It can be expected that the range of training opportunities for northerners will expand to provide the increased Yukon and NWT workforce with the skills necessary to take up jobs in the oilfields and to advance to more senior levels within their occupations. The Government of Yukon assumes that many of these training programmes will be co-ordinated through existing facilities in Yukon.

2.3.4 Government services related to oil and gas developments

As operations in the Beaufort expand and phase in to production the level of services required from support businesses such as diving, transportation, mechanical and catering companies will increase significantly. The resulting expansion in northern business capacity will have a multiplier effect that will ripple through the Yukon economy and ultimately lead to increased demands on government

services. An increase in population in centres such as Dawson and Whitehorse will require an expansion of municipal services, for example. Road maintenance on the Dempster will have to be intensified to accommodate an increase in traffic. Resource management regimes will be implemented to protect the wildlife populations in the critical and sensitive environment of northern Yukon. Training programmes will be established and the pressure on other government programmes will be increased as a result of the development and production of Beaufort hydrocarbon resources. In sum, the Government of Yukon and local governments in a number of Yukon communities will experience increased demands on their services as a result of the social and economic impacts of oil and gas development.

2.3.5 Summary of the socio-economic implications of development options

The business community and the labour pool in Yukon, as well as the territorial and local governments will all be affected significantly by the course of Beaufort Sea oil and gas development.

Businesses will re-orient and expand to provide a variety of services to the Beaufort operators. The range

of available options includes air and surface transportation, diamond drilling, component fabrication, construction and site preparation.

The number of Yukoners seeking and obtaining employment will increase. Training programmes will be established to improve the skills of those working in the hydrocarbon industry.

• Increased demands will be placed on government services due to a proportionately high degree of expansion in the population and economic base of Yukon.

3.0 FACTORS RELATED TO YUKON'S INVOLVEMENT IN BEAUFORT SEA DEVELOPMENT

Yukon's approach to Beaufort Sea oil and gas development is determined to a large extent by its perceptions of how that development will occur. It is determined too by a number of additional factors, some related to the socio-economic characteristics of the territory, some to general concerns regarding the social and political development of the territory, and some to experience with a number of hydrocarbon projects that have been proposed or developed in Yukon.

Since 1898 Yukon's population has grown and waned through economic cycles. Its present level is well in excess of 20,000 people who live in 21 settlements from 60° N to above the Arctic Circle. All but one of these communities are on a well-developed, 2,000 mile network of roads and all are linked by air traffic and a sophisticated telecommunication system.

The growth of Yukon communities has been and continues to be a result of resource extraction and the development of transportation routes. For the most part, the development of the single industry mining communities, the transportation

and service centres, and even many of the present native communities has been due to the push to discover the mineral and hydrocarbon resources of the region, the need to obtain access to those resources, and the understanding of the economic value of extracting those resources. Present-day road and air networks follow the routes developed during earlier periods of Yukon's growth. The Klondike Highway, linking Skagway and Whitehorse with Dawson, parallels the older rail and river system. The Dempster Highway, linking Dawson with the Beaufort Sea and Mackenzie Delta, shadows the much travelled route between the Klondike and Herschel Island.

In broad terms, the history of economic activity, settlement and travel in Yukon has affected strongly the views of Yukoners, longtime residents and more recent arrivals alike. Dawson is seen to be close at hand and easily accessible from Whitehorse. Herschel Island, and hence the Beaufort Sea and north slope, is as salient as the central Yukon or the southern lake system. Fishermen living in Whitehorse are as likely to discuss the fishing hole on the Firth River north of the British Mountains as they are to discuss the Yukon River salmon run. In a very real and a very significant sense Yukoners view the entire territory from south to north as being their home locale and their home

region. Activities off the coast of Yukon are attended to with as much interest as activities along the Alaska Highway corridor. Yukoners feel that they have as strong a role to play in northern Yukon developments as they do in economic developments in the more populated southern portion of the territory. Yukoners, too, feel that they should be given the opportunity to avail of business and employment opportunities in new developments off the northern coast just as they participated in previous whaling and fur trading activities in these same regions. At the same time, Yukoners feel a responsibility to work toward the preservation of the delicate ecosystems in the general area in which oil and gas developments are currently taking place.

These interests and expectations have been expressed in various ways by native Yukoners, the non-native population and by the Government of Yukon speaking for all resident Yukoners.

The people of Old Crow have expressed an interest in the north slope as a hunting and trapping area and they have indicated their concern for the preservation of the Porcupine caribou herd while speaking at land claim talks and before various panels of inquiry. Likewise, the Indian people of Dawson are concerned about the preservation of

caribou and other species important to the traditional way of life.

At the same time, Old Crow residents have worked with the major oil companies. The Ross River Indian Band is anxious to participate in the economic benefits that could be derived from barite mining in the North Canal Road area, and the Council for Yukon Indians, representing some 6,000 status and non-status Yukon Indians, has spoken in favour of Indian involvement in Beaufort-related economic development.

The Indian people of Yukon, then, appear to be very much concerned about the potential environmental impacts of oil and gas development in the Beaufort and they appear to be eager to participate in the economic opportunities that they see arising from such developments.

Indeed, the general willingness of Yukoners to consider Beaufort hydrocarbon development as a source of economic opportunities is reflected in the activities of the business community and in the number of inquiries about employment received at CEIC - Whitehorse, the Government of Yukon, and the major oil companies' offices. Many individual businesses in Yukon have provided services to Dome, Gulf and Esso over the past few years. The Whitehorse Chamber of Commerce

has met with officials of the major companies to review their plans for oil and gas production. A cohesive group of Yukon business leaders made strong presentations on behalf of the business community at the 1982 government/industry workshop on northern participation in oil and gas development. There is a growing consensus among broad sections of the Yukon community that the economic development of the region is closely linked with the development of Beaufort Sea hydrocarbons and with the opportunities that such development will provide.

Yukoners' increased awareness of the oil and gas potential in the Beaufort Sea region is reflected in three government policy papers: The Northern Yukon Resource Management Model, Beaufort Development: The Yukon Perspective, and Land: A Yukon Resource.

The Northern Yukon Resource Management Model was developed in 1980 by the Government of Yukon in order to provide a comprehensive framework for land use planning in the British Mountains and coastal plain areas of Yukon. Three general categories of land were designated under the guidelines of the model. A national wilderness park was called for in the general area lying west of the Babbage River. Herschel Island was assigned to be a territorial park, and

the coastal plain between Stokes Point and Shoalwater Bay was designated as a Resource Management Zone in which industrial development and transportation corridors could be established in a manner that would minimize impacts on the environment and the wildlife of the region. The concept of the management model was extended to include the Porcupine River basin and, as such, the model is intended to address the concerns of environmentalists, native people, and hydrocarbon and mineral developers all of whom have an interest in Northern Yukon.

Beaufort Development: The Yukon Perspective is a broader policy document that builds on the work presented in the Northern Yukon Resource Management Model. Not only does it reflect the interest of the Government of Yukon in the careful and planned development of northern Yukon, it also outlines the socio-economic benefits that Yukoners expect to occur as a result of development and the responsibilities that Yukoners see as falling on their shoulders as this development ensues. The policy paper indicates, in this respect, that Yukoners see themselves as northerners who have a significant role to play in the production of oil and gas from the waters off the Yukon coast.

The argument that as involved northerners, Yukoners

should play a major role in planning for northern development is reiterated in Land: A Yukon Resource. Understanding the need for carefully controlled development, especially in the fragile environment of northern Yukon, the Government of Yukon has proposed a land use policy that would see the establishment of a Land Use Planning Board and regional Planning Committees. These committees would represent Indian, community, federal government and Government of Yukon interests and would be responsible for recommending on the acceptable use of land within a given area, such as Stokes Point, King Point or the coast plain and Richardson Mountains in Northern Yukon.

As the Government of Yukon and Yukoners in general consider the nature of the events taking place in the Beaufort Sea, and as they plan to assume an active role in such developments, they can look for direction to their previous experiences in the oil and gas arena.

The Canol Pipeline, the Haines-Fairbanks Pipeline, the Skagway-Whitehorse Pipeline, the Whitehorse oil refinery, exploratory drilling on Eagle Plains, the development of the Kotaneelee Gas Field and predevelopment work on the Alaska Highway Gas Pipeline are among the various hydrocarbon projects to which Yukoners have been a party. Some

of these projects have been of considerable benefit to Yukon while others, such as the development of the Kotaneelee Gas Field, have been of little direct value to Yukoners. Collectively, however, these projects have served to define the costs and benefits of hydrocarbon developments. As well, they have given Yukoners the opportunity to develop planning and assessment skills (1) to evaluate whether or not the social and environmental costs of oil and gas development are minimized and the social and economic benefits of hydrocarbon development are maximized, and (2) to participate in the management of development when such an opportunity arises.

On a broader scale, the involvement of the Government of Yukon in Beaufort Sea development is governed by its move toward responsible government and its belief that the residents of Yukon should be accorded the same opportunities within Confederation that the provinces now enjoy and value.

4.0 GOVERNMENT OF YUKON MANDATE FOR
BEAUFORT-RELATED WORK

The Yukon Act vests the responsibility for socio-economic and wildlife concerns in Yukon with the Government of Yukon. These responsibilities are reflected in legislation covering matters such as municipal affairs, education, public health, highways, labour standards, workers compensation, wildlife, and area development.

The day-to-day administration of the Government of Yukon has been in the hands of the elected members of the Yukon Legislative Assembly through the Government Leader and the Executive Council, since the letter of instructions issued to the Commissioner on October 9, 1979 by the then Minister of Indian and Northern Affairs, Jake Epp. As a result, two important factors affect government decisions and the enactment of government legislation regarding the social and economic development of Yukon. The first of these is the fact that in a very real sense Yukon residents now have a direct voice in the affairs of their government. The second is that the Epp letter of instructions has started Yukon on the road toward fully responsible provincial status within confederation.

The legislated mandate of the Government of Yukon with respect to Beaufort-related development in Yukon is expressed in a set of acts that cover land use, resource protection, exploration, development, health, transport, employee rights, company registration, and building standards. These acts are administered by departments within the Government of Yukon and, in a few instances, by branches within the federal department of Indian Affairs and Northern Development. A list of Regulations and Acts relevant to exploration and development in Yukon is presented in Appendix A.

In addition to matters over which it has direct legislative control, there are issues over which the Government of Yukon has strong interests and over which it represents the widespread concerns of the people of Yukon. Land claims, land use, land ownership and resource management are factors related to economic development in general, and Beaufort development in particular, that will have a direct impact on the social fabric of Yukon life.

Unless these issues are addressed and resolved expediently with the involvement of Yukoners, developments such as will occur in the Beaufort Sea will hold few benefits and many direct and indirect costs for Yukoners. The Government of Yukon, then, sees its mandate with respect to Beaufort

Sea development as extending to these topics in a manner such that it can work co-operatively with all involved groups to achieve an equitable resolution to land issues affecting hydrocarbon development in Yukon and to achieve a just resolution to such issues that will benefit all Yukoners.

5.0 GOVERNMENT OF YUKON POSITIONS ON
ASPECTS OF BEAUFORT SEA DEVELOPMENT

The positions held by the Government of Yukon regarding Beaufort Sea development have been adopted on the basis of Yukoners' expectations about the manner in which development will occur, on the basis of Yukoners' previous experiences with hydrocarbon developments, and on the basis of the Government of Yukon's responsibilities to ensure that Yukoners obtain the maximum benefits from development in their back yard and are subjected to the minimum social and environmental costs. The positions cover a wide range of topics from heritage resources, through wildlife management matters, to social, economic and land use issues.

The majority of the positions outlined in this section of the paper have been stated elsewhere in other Government of Yukon policy documents. They can be organized and classified in many different ways, but for purposes of convenience they will be grouped under five major headings in this report. These headings represent the general social and political objectives of the Government of Yukon as these relate to Beaufort Sea development; the level of preparedness and the knowledge gaps present with respect to Beaufort

Sea development; socio-economic issues; wildlife and environmental issues; land use issues; and management strategies for impacted development zones.

5.1 General Social and Political Objectives

The development of hydrocarbons in the Beaufort Sea region is occurring at a period in Yukon's history when land claims, economic development and the move toward fully responsible government are of paramount importance. The Government of Yukon's involvement in Beaufort Sea hydrocarbon activities will be governed by these broad concerns. The following position statements outline the current working assumptions underlying the government's approach to on-shore and off-shore development in North Yukon.

1. The Government of Yukon holds that all Yukon residents, as northerners, should be given the opportunity to avail of jobs, training and business transactions with the exploration and development companies in a manner that recognizes Yukoners' special interests in Beaufort activities.
2. The Government of Yukon reaffirms its commitment to a fair and prompt settlement of all outstanding land claims

issues on Yukon lands. The Government of Yukon holds that a settlement of claims that is equitable to all Yukon residents is a necessary part of the long term development of the Beaufort Sea region.

3. The Government of Yukon holds that planning for Beaufort Sea oil and gas development cannot be done effectively without the involved parties taking account of the particular perspectives and aspirations of a Yukon population that is both native and non-native in composition, and whose lifestyle is founded on a firm base of resource extraction and transportation and service industries, as well as traditional harvesting. While Yukoners feel a strong affinity for their neighbours and fellow northerners in the NWT, Yukoners see themselves as being a separate group with distinct social, economic and political goals and objectives.

4. The Government of Yukon expects to share in the revenues derived from resources produced in Yukon and off its northern shores and it expects to negotiate an equitable agreement to that end.

5. The Government of Yukon is deeply concerned about the costs of energy in Yukon. It expects to be a party to future studies regarding the cost-effectiveness of using

Beaufort hydrocarbons to service Yukon's energy needs and to support further economic growth.

6. The Government of Yukon seeks to play a full and comprehensive role in intergovernmental discussions relevant to Yukon. This is particularly the case with respect to Beaufort Sea activities since operations in the region will have a significant effect on Yukon's environment and on the socio-economic conditions of Yukon residents.

7. The Government of Yukon will make every effort to work co-operatively with industry and other jurisdictions to ensure that the residents of Yukon obtain their fair share of the benefits of development, and to ensure that any ill effects of development are mitigated.

5.2 Level of Preparedness and Knowledge Gaps with respect to Beaufort Sea development

The Government of Yukon has for the past two years been working co-operatively with the federal government and with the major off-shore operators in an effort to prepare effectively for Beaufort Sea development. Economic, environmental, transportation, land claims and heritage issues

have been addressed at meetings and by on-going working groups. However, much of the planning that remains to be done prior to the production of hydrocarbons in the Beaufort depends on information that is not now available. The Government of Yukon expects that much of the data required for planning will be presented in the EIS. It plans to supplement this information through its own programme of research, funding for which is currently under negotiation with the federal government.

Data on wildlife in Northern Yukon are incomplete and inventories are needed on the sheep, moose, wolf and fur-bearer populations north of the Porcupine River. Further research is needed on birds of prey and the location of polar bear maternity dens. The critical habitat of the coastal plain grizzly bear population needs to be mapped and management regimes need to be developed to mitigate the impacts of human activity on raptors, bears and caribou, as well as the other species in the northern ecoregions.

Northern Yukon is not only a rich and critical habitat for wildlife but also an area of significant archaeological and historic importance. In planning for oil and gas related activities in the region the Government of Yukon

will need to develop an updated inventory of historic and archaeological sites on Herschel Island and the coastal plain of Northern Yukon, and it will also need to update its survey work on potential sites for territorial parks.

With respect to Yukon's social and economic development as a result of Beaufort Sea activities, the Government of Yukon is planning to examine a number of factors related to transportation, community infrastructure, employment, business development, labour accommodation and resource revenue sharing.

A general overview of the information required by the Government of Yukon in its work on Beaufort Sea development is contained in Appendix C of Beaufort Development: The Yukon Perspective and is reproduced in Appendix B of this report.

5.3 Socio-economic Positions

5.3.1 Manpower

1. The Government of Yukon supports the recruitment of Yukon residents for jobs in Beaufort development projects. It holds that the jobs available to Yukoners should be stable

and should have the potential to start employees on long term career paths. It views an increase in the number of Yukoners employed in the Beaufort as being consistent with its primary goals of promoting the diversification, orderly expansion and stability of the Yukon economy.

2. The Government of Yukon expects that the manpower requirements of the Beaufort operators will be identified with sufficient lead time to allow the government to channel potential employees into suitable training programmes.

3. The Government of Yukon is prepared to work with industry and with the federal government in establishing job training, upgrading, apprenticeship and specialized skills training programmes. It holds that both governments and industry have responsibilities to ensure that no Yukoners are barred from employment because of the absence of suitable training opportunities.

4. The Government of Yukon expects the major operators to disseminate information about job opportunities in Yukon communities. It sees school career days, recruitment drives and advertising as being among the more successful ways of doing this and it is encouraged by the present activities of the industry in this regard.

5. The Government of Yukon strongly favours the rotation of Yukon workers from their home communities in Yukon. It is an objective of the Government of Yukon to strengthen the social and economic structure of our communities and the ability of Yukoners to rotate from their Beaufort jobs to their Yukon residences supports this objective. The Government of Yukon views job rotation from Yukon communities as being an extension of a programme that is already operating successfully in the Beaufort Sea area communities.

6. The Government of Yukon strongly encourages the proponents of Beaufort development to facilitate the employment of native Yukoners and women. In particular, it supports the development of work schedules that would allow native people to engage in their traditional pursuits of hunting, fishing and trapping.

5.3.2 Business

1. The Government of Yukon expects the proponents of Beaufort development to give every consideration to local Yukon suppliers and service contractors in the exploration and production phases of oil and gas recovery.

2. A local business is defined as one whose management and main

base of operations are located in Yukon, employs people resident in Yukon, and that pays company taxes in Yukon.

3. The Government of Yukon encourages the design of bid documents for supplies and services that reflect the structure and capabilities of Yukon's business community. It encourages on-going dialogue between the major companies and local industry, trade and commercial associations, and it favours long-term agreements with local contractors for the regular supply of materials and services.
4. The Government of Yukon holds that, where practical, northern based scheduled and charter air services and northern based trucking companies should be used for the movement of personnel and equipment to and from Yukon and the Beaufort region.
5. The Government of Yukon is fully committed to work with the major companies, local business interests and the federal government to facilitate the development of business opportunities for local companies wishing to service the Beaufort operations or wishing to exploit the spin-off potential from a general upswing in economic activity. The flow of relevant information, the availability of financing, and access to management training are all seen to be important factors in

the successful entry of large and small Yukon businesses into the Beaufort arena.

5.3.3 Energy

The per capita consumption of oil products in Yukon is significantly higher than the Canadian national average due to the demands of transportation, space heating requirements, and a reliance on diesel for electricity generation. Expenditures on costly hydrocarbon fuels thus contribute substantially to the high price of living in Yukon.

The Government of Yukon, acutely aware that energy costs act as a brake on the economic and social development of the territory, is committed to finding ways in which these costs can be ameliorated. The use of Beaufort hydrocarbons in Yukon communities and the possibility of developing Yukon hydrocarbon resources as a spin-off from Beaufort development are attractive options and ones that the Government of Yukon intends to pursue. Consequently, the Government of Yukon is anxious to participate in any study regarding the feasibility supplying Beaufort and other northern hydrocarbons to Yukon communities. Two topics of study that are of immediate interest are (1) the inclusion of Yukon communities within the distribution zone of a refinery lo-

cated in the Mackenzie Delta area, and (2) the feasibility of piggybacking oil and gas from the Eagle Plains region through a pipeline that originates in the Beaufort area and passes through southern Yukon (Foothill's Phase III Dempster Lateral project would provide one possibility for this).

5.3.4 Transportation

Historically, the growth of economic activity in Yukon has depended greatly on the development of transportation networks. Indeed, Yukon's involvement with current Beaufort activities and Yukoner's perceptions that the economic development of their region is tied closely to Beaufort development are a result of the land and air links between Yukon communities and the Beaufort region.

Direct road access from Southern Canada to the Mackenzie Delta is provided by the Alaska Highway, Klondike Highway and Dempster Highway. This route is extended in the winter months by an ice road between Inuvik, NWT and Tuktoyuktuk, NWT. A sea-rail-road link between the west coast and the Beaufort Sea is available through the port of Skagway, Alaska, the White Pass and Yukon Railroad and the Alaska-Klondike-Dempster Highway system. A regional air carrier provides scheduled service between Whitehorse, the turn around point

for CP Air's service from Western Canada, and Inuvik, the stepping off point for Beaufort traffic. The manner in which the Beaufort Sea oil companies plan to use these transportation routes through Yukon will have a direct impact on the net economic benefits that Yukoners will derive from Beaufort Sea development.

The Government of Yukon supports the use of transportation routes through Yukon for Beaufort-related activities. It supports the extension of these routes through the construction of a connector road between the Dempster Highway and the Yukon coast, through the development of port facilities on the Yukon coast, and through the expansion of air support facilities at a Yukon harbour site. At the same time, the Government of Yukon is mindful of the environmental impact of transportation in the north and it proposes to manage designated transportation corridors in a manner that will mitigate adverse environmental effects.

The Government of Yukon is prepared to participate in intergovernmental and government-industry discussions regarding the development of transportation infrastructure. One of the positions of the government in such talks will be that if Yukon contributes toward the costs of maintaining

an augmented transportation network the Government of Yukon will expect fair and due consideration to be given to local Yukon carriers in the movement of personnel and materials to the Beaufort.

The Government of Yukon recognizes the potential of the Dempster corridor as an energy transportation route and it supports the use of this route for oil or gas pipelines, provided that environmental problems associated with such projects can be satisfactorily resolved.

5.3.5 Community development

Population growth and business and industrial expansion as a result of Beaufort oil and gas development will have an impact on some Yukon communities. With careful planning, with co-operative liaison between government and industry, and with sufficient lead time to expand infrastructure and facilities the Government of Yukon expects that community growth will be of overall benefit to Yukon and will enhance the social and economic character of the region. In this respect the Government of Yukon encourages the major Beaufort operators to locate their permanent employees in existing Yukon communities. It strongly supports the use of Yukon centres as rotation points for commuting workers and, except

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for special circumstances, it does not support the establishment of new, single-industry towns *. The Government of Yukon is committed to the continual upgrading of school, health and general municipal services in existing Yukon communities and it holds that the availability of these services to Beaufort workers residing in Yukon will serve to stabilize the labour force and increase the quality of life for these employees, while at the same time allowing them to contribute to the long term political, social and economic development of Yukon.

In order to cope adequately with the impact of Beaufort development on Yukon communities and in order to minimize any disruption in services, the Government of Yukon will need to be involved in a number of planning exercises. It will be necessary for the government, in consultation with industry, to identify the specific communities that will be affected by Beaufort activities and to predict the level and types of impact on the basis of the operators' projections regarding the nature of Beaufort development. The services offered in these communities can then be studied with a view to determining the modifications that will need to be made in physical infrastructure to cope with increased demands on facilities. The social, economic and political structures of the communities can be examined also to establish the

manner in which these systems can be changed to cope with rapid development.

* The long term duration of Beaufort hydrocarbon extraction and the nature of the facilities needed in the Beaufort during the production phase of development raise the possibility that a new community on the Yukon coast may ultimately be desirable. If it can be demonstrated that such a community would be self-sustaining, would have the potential to diversify its economic base and could be established without undue threat to the surrounding environment and wildlife, the Government of Yukon would be willing to consider supporting such a townsite development.

5.3.6 Social policy and community liaison

Planning for the socio-economic development of Yukon as a result of Beaufort Sea oil and gas activities must account not only for positive impacts such as employment, training and business opportunities but also for potential negative impacts such as unmanageable immigration, the breakdown of traditional community lifestyle patterns and excessive stresses on social service delivery systems. The type of proactive planning discussed in section 5.3.5, carried out jointly between government and industry, can do much to mini-

nize the probability of such disruptive occurrences. Community liaison programmes, by informing Yukoners on a regular basis about the possible impacts of development, can also help reduce the undesired consequences and maximize the positive outcomes of such development.

The Government of Yukon holds that the proponents of Beaufort Sea development should develop a community liaison plan outlining a mechanism for the regular dissemination of project information to Yukoners. The objective of the liaison plan should be to maximize the amount of project information available to residents and to optimize local co-operation and support, such as can be obtained from LIDs, in the distribution of this information.

5.4 Wildlife and Environmental Positions

5.4.1 Wildlife Concerns

The Government of Yukon is acutely aware that oil and gas related developments in Northern Yukon and increased use of the Dempster Highway as a result of Beaufort activities will have serious implications for the wildlife and environment of the region. The Government of Yukon is resolved to establish a resource management regime for Northern Yukon that will address significant wildlife concerns and minimize

the impacts of development. The resource management regime will provide for the protection of critical wildlife populations and habitat. It will allow native people who currently use the area to hunt and trap under the laws of general application and it will ensure that traditional and current users of the area contribute to the management of the resources.

Details of the resource management regime cannot be finalized until further research has been conducted on a number of topics.

Data are lacking on the density, distribution and movements of the North Slope moose population, nor is information available on critical habitat. The habitat and population characteristics of wolves and other furbearers north of the Porcupine River are largely unknown. An inventory of North Slope raptors is incomplete. It has not been determined if polar bears have maternity dens in Northern Yukon. Habitat types necessary for the survival of North Slope grizzly bears have yet to be mapped. The productivity of Dall Sheep and their movements and range in the British and Richardson Mountains remain to be established. These and other data are needed so that hunting pressures can be regulated in an appropriate manner and so that general dev-

elopment and transportation activities can be managed effectively.

It is worth a reminder that wildlife in Northern Yukon was severely affected by previous whaling activities in the Beaufort region. The Government of Yukon is determined that such widespread and uncontrolled destruction of Yukon's wildlife species will never happen again under any conditions of development.

5.4.2 Management issues

Management zones will be established in Northern Yukon for the purpose of formulating and implementing appropriate resource management regimes in the face of development activities. One of these zones covers the central and eastern portion of Northern Yukon, north of the Porcupine River (Zone C), and has been described in the Northern Yukon Resource Management Model. Another zone extends in a corridor along the Dempster Highway route and is the subject of a Dempster Highway Corridor Land Use Plan currently under preparation.

With respect to the North Slope management zone, the Northern Yukon Resource Management Model makes provision for the establishment of a Resource Management Committee pursuant

to the Territorial Lands Act. Consisting of federal, territorial, COPE and Yukon Indian representatives, this committee would advise the federal Minister of Indian Affairs and Northern Development and the Yukon Minister of Renewable Resources concerning land use and management matters, concerning required studies and inventories and concerning public participation processes.

Management concerns under a zone management framework can be considered on a number of levels ranging from the general to the specific. For instance, development plans and land use requests for a facility such as a base camp can be reviewed in broad terms and be given qualified approval in principle or turned down as being inappropriate for the site in question. Once approval in principle for development has been given, site specific research can be conducted to identify particular environmental and wildlife concerns and to plan mitigative measures. Archaeological sites, nesting areas and seasonal migration routes may need to be taken into account in site development, for example. Ultimately, this work leads to specific management systems that can be implemented to control particular impacts and activities.

In addition to the disturbance of archaeological sites and nesting areas, and the effects of transportation corridors

on the migration patterns of the Porcupine caribou herd, the Government of Yukon anticipates the need to monitor the impact of hunting pressures on the Dall Sheep population in Northern Yukon and to monitor and manage the nature of bear-human interactions on the North Slope.

5.4.3 Land use in Northern Yukon

Resulting from its concerns over wildlife and historic site protection, its commitment to preserve the opportunity for native peoples to continue their traditional hunting and fishing activities under the laws of general application, and its resolve to foster the general social, economic and political development of Yukon, the Government of Yukon has proposed three types of management and land use zones for Northern Yukon. One such zone, as described in the Northern Yukon Resource Management Model, is a national park, another is a territorial historic park, while the third is a special resource management zone referred to in section 5.4.2.

The Government of Yukon continues to advocate the establishment of a national park embracing the western most portion of the British Mountains and the coastal plain. A prime purpose of the park would be to protect critical habitat for several species and, in particular, the calving grounds of the

Porcupine caribou herd. Activities in the park should be restricted and carefully managed.

The Government of Yukon remains committed to the establishment of a territorial historic park encompassing the entire area of Herschel Island. This park would provide for the protection, preservation and management of historically significant and important sites. Activities in the area would be restricted to those that would not jeopardize the historical integrity of the island and its adjacent waters.

The Government of Yukon holds that the establishment of a resource management zone in Northeastern Yukon is necessary for the effective management of development activities, while ensuring that measures are in place for the protection and conservation of the wildlife resources and the environment. The management principles for such a zone also apply to the Dempster transportation corridor.

The Government of Yukon's concerns about the wildlife and environment of Northern Yukon extend to the historic and archaeological resources of the region. Plans for the identification and protection of significant historic sites will be an important component of any land use proposals and general development proposals for the area.

Substantial research remains to be done on the location and nature of historic and archaeological sites on Herschel Island and the coastal plain. The Government of Yukon's Heritage Branch is in the process of identifying priority concerns and is actively involved in discussions with the Archaeological Survey of Canada regarding salvage and preservation programmes.

5.5 Planning for Beaufort Development

The Government of Yukon has developed two planning perspectives with respect to its work on Beaufort Sea development. One of these perspectives relates to land use planning in its traditional sense and is described in the document Land: A Yukon Resource. The other perspective encompasses regional planning in a broader framework that includes socio-economic and socio-political concerns as well as resource issues.

5.5.1 Land use planning

The Government of Yukon outlined its land use policy in April, 1982. It stands by this policy and it strongly asserts that a land use planning process must be created which is structured, is responsive to Yukon conditions and furthers

the evolution of self-government in Yukon. The government's policy outlines a planning strategy involving the development of legislation, the creation of a Yukon Land Use Planning Board and Land Use Planning Committees, the division of Yukon into planning districts, and the transfer of land from federal to territorial jurisdiction as land use plans are adopted. This policy is compatible with and is a more general elaboration of the set of principles outlined in the Northern Yukon Resource Management Model. The acceptance of this policy by the federal government would facilitate an expeditious response to Beaufort development plans that will involve Yukoners, since the policy provides the mechanism to deal flexibly with changing development proposals and to incorporate the various wildlife, environmental and historic resource concerns of Yukoners.

5.5.2 Regional socio-economic planning

As has been argued elsewhere in this paper, the Government of Yukon holds that Yukon residents will experience social and economic impacts as a result of Beaufort Sea development. It holds, too, that Yukoners, as northerners, should be given access to employment, training and business opportunities in Beaufort projects. In order to cope with the anticipated impacts and opportunities of Beaufort activities the Government of Yukon has taken a broad regional planning approach to

development proposals that essentially telescopes Yukon communities with the Beaufort Sea. This approach focuses on transportation, business, supply, employment, training, accommodation and labour pool issues - on the functions that Yukoners and the Yukon business community can fill with respect to Beaufort development - and it attends to distance and geographical perspective only in terms of how these factors affect the various functional roles of Yukoners in Beaufort development. In adopting this socio-economic planning approach, the Government of Yukon is committed to obtaining the maximum benefits from development for Yukon's resident population and it is committed to reducing the undesirable impacts of such development.

6.0 CURRENT GOVERNMENT ACTIVITIES
REGARDING BEAUFORT SEA DEVELOPMENT

6.1 Government of Yukon's Beaufort Working Group

An interdepartmental working group has been established in the Government of Yukon to review and respond to issues involving Yukon's participation in Beaufort Sea development activities. This work is co-ordinated through the Department of Economic Development and Intergovernmental Relations with programme departments holding the responsibility for developing positions on matters falling within their own mandates.

The range of Beaufort-related topics addressed by the Government of Yukon includes a review of the Beaufort Environmental Impact Statement; the preparation of a position statement for the BEAR process; monitoring the BEARP hearings; developing government policy regarding Beaufort development; assessing site specific proposals such as Gulf's request to develop a marine base at Stokes Point; compiling data that will be used as the basis for resource management regimes; preparing briefs to hearings such as the Senate Committee for Northern Pipeline's hearings on Beaufort transportation;

participating in planning and impact assessment exercises; addressing business and training issues; and working with government and industry groups on infrastructure, socio-economic and environmental matters.

6.2 Intergovernmental and Government-Industry Activities

The Government of Yukon has held discussions with the proponents of development and with the federal and NWT governments on a number of matters related to Beaufort development. These discussions have involved people from the political, senior bureaucratic and working levels of government and they have served to outline Yukon's policy on Beaufort development and Yukon's resolve to participate fully in that development as a northern region with special concerns in the Beaufort. The Government of Yukon reaffirms its commitment to continue these discussions and the related work on Beaufort development in a spirit of co-operation and with a consideration for the needs of Yukon's northern neighbours in the NWT.

6.3 Fiscal and Staffing Implications

The Government of Yukon has assessed its need for additional staff to work on Beaufort-related research, policy

and planning matters and it is negotiating with the federal government for funds to conduct research regarding the impact of Beaufort development on Yukon. The rate of acquisition of additional staff and the implementation of specific research and planning projects will depend largely on the timing and nature of pre-production and production activities in the Beaufort. It is envisaged, however, that as many as seven people will be hired over a period of time to complement the work that is already being done on Beaufort and at least \$2 million (1981) needs to be expended to conduct research basic to planning management strategies for Beaufort-related developments in Northern Yukon.

7.0 CONCLUSIONS

The Government of Yukon supports oil and gas developments in the Beaufort Sea region. It feels that such developments can be managed in a manner that will ensure optimal long-term social and economic benefits for Yukoners and that will minimize impacts on wildlife and on the environment. The Government of Yukon, consequently, is actively advocating the involvement of Yukoners in various hydrocarbon-related activities. It is doing so on the basis of Yukon's historic ties with the Beaufort, on the understanding the Yukoners themselves are anxious to participate in Beaufort work, and in recognition of the fact that Yukon constitutes a distinct region with interests in the Beaufort that are somewhat separate from those of other impacted areas.

The Government of Yukon is working to increase the number of employment, business and training opportunities available to Yukoners who wish to work in the Beaufort. It stresses the value to be derived from relying on a Yukon workforce committed to living close to the development region and from using Yukon businesses experienced in operating in the environment and climate of northern Canada.

The Government of Yukon is working actively to develop management regimes that will minimize the impacts of general and site specific developments on Yukon's wildlife resources and environment.

While the Government of Yukon has the legislated and electorally ascribed mandate to work on socio-economic and wildlife matters related to Yukon's involvement in Beaufort development, it recognizes that such work cannot be done effectively without co-operation between itself, industry, the federal government and GNWT. Indeed, it feels that only through the fair exchange of views and information can appropriate planning take place.

The Government of Yukon supports its NWT neighbours in their own endeavours concerning the Beaufort. It is fully prepared to continue discussions and dialogue with industry regarding development plans. The Government of Yukon, also, is committed to pursuing its work with the federal government so that, co-operatively, both jurisdictions can ensure that benefits from northern development equitably accrue to northerners.

In this last regard, the Government of Yukon supports the Beaufort Environmental Review Process. It holds that the

process will contribute greatly to our knowledge of development options and to our understanding of the desirable and potentially undesirable consequences of oil and gas development. The Government of Yukon intends to play a full role in BEARP, it looks forward to gaining a better awareness of the positions of the other parties to Beaufort development and it feels confident that the Beaufort EIS review process will foster additional work leading to the timely and orderly development of Beaufort resources.

References

Government of Yukon, Beaufort Development: The Yukon Perspective. November, 1981

Government of Yukon, Land: A Yukon Resource. April, 1982

Government of Yukon, Northern Yukon Resource Management Model. October, 1980

APPENDIX A

REGULATIONS AND ACTS
RELEVANT TO EXPLORATION AND DEVELOPMENT
IN NORTH YUKON

REGULATORY APPROVALS WHICH COULD APPLY TO RESOURCE DEVELOPMENT PROJECTS WITHIN YUKON

LEGISLATION

REGULATORY APPROVALS

ADMINISTERING DEPARTMENT

APPRENTICE TRAINING ACT

- where apprentices who are Yukon residents are employed by a company, standards must be met with regard to the training of those apprentices.

Adult & Continuing Education Branch; Education.

AREA DEVELOPMENT ACT

- department must be consulted with respect to project plans, prior to zoning of land and assignment of land areas; any regulations regarding standard of development (zoning and building) are put into effect following consultation between department and proponent.

Community & Municipal Services, Municipal and Community Affairs.

BLASTING ACT

- permit required to carry out any operation in which explosives are used for blasting; permit required to store in excess of 150 pounds of explosives.

Mines Inspection Branch, D.I.A.N.D.

BOILER AND PRESSURE VESSELS ACT

- for provisions/standards commonly used, note: Boiler Regulations; Welding Regulations; C.S.A. Standard W47.1-1973; C.G.A. Standard B51-1975 "Code for Construction and Inspection of Boilers and Pressure Vessels"; C.S.A. Standard Z98-1968 "Aerial Passenger Tramways"; C.S.A. Standard B-52-M 1977 "Mechanical Refrigeration Code"; American Society Mechanical Engineers Codes.

Protective Services, Municipal and Community Affairs.

LEGISLATION

REGULATORY APPROVALS

ADMINISTERING DEPARTMENT

**BUILDING STANDARDS
ACT**

- for provisions/standards commonly used, note: National Building Code of Canada; Canadian Plumbing Code; C.S.A. Standard B139-1976 "Code for Oil Burning Equipment"; C.G.A. B149.2-1976 "Code for Propane Gas Equipment; CAN 3-A23.3-M77 "Code for Design of Concrete Structures"; CAN 23.3 of CAN 3-516.1-M 78 Steel Structures for Buildings; 45 N.F.P.A. Standards; Guide to Relocatable Industrial Camps. Building permits required in any area not within a Municipality or Local Improvement District.

Protective Services, Municipal and Community Affairs.

COMPANIES ACT

- companies incorporated elsewhere must register with department within 30 days of commencing operations in Yukon.

Corporate Affairs, Consumer and Corporate Affairs.

**ELECTRICAL PROTECTION
ACT**

- for provisions/standards commonly used, note: Canadian Electrical Code; UL C and CSA Standards for fire alarms.

Protective Services, Municipal and Community Affairs.

**ELEVATOR AND FIXED
CONVEYANCES ACT**

- for provisions/standards commonly used, note: Elevator Regulations, CSA Standards for Elevators, Tramways and Moving Walkways.

Protective Services, Municipal and Community Affairs.

FIRE PREVENTION ACT

- for provisions/standards commonly used, note: National Fire Code of Canada; National Fire Protection Codes; American Petroleum Institute; Canadian Gas Codes; Canadian General Standards Board; Canadian Standards Association; Underwriters Laboratories of Canada; U.S. Department of Transportation.

Protective Services, Municipal and Community Affairs.

LEGISLATION

REGULATORY APPROVALS

ADMINISTERING DEPARTMENT

FOREST PROTECTION ACT

- permits required to burn debris or to use fire for any industrial purposes during the fire season; company must have fire suppression capability (e.g. required equipment).

Forest Resources Section,
D.I.A.N.D.

FUEL OIL TAX ACT

- annual renewable fuel oil user emblem required for each licensed commercial vehicle or aircraft operated as an interprovincial or through carrier; permit required to purchase fuel oil tax exempt, for purposes set out in Section 5 of the Act.

Revenue and Taxation,
Finance.

WILDLIFE ACT

- licence required to capture, mark or in any way handle wildlife.

Wildlife, Renewable Resources.

GASOLINE HANDLING ACT

- for provisions/standards commonly used, note: Canadian General Standards; ULC Standards; Canadian Standards Association Codes; U.S. Dept. of Transportation Codes; USMSG Standards for Metals Gauge for Sheet Iron and Steel.

Protective Services,
Municipal & Community Affairs.

HEALTH CARE INSURANCE PLAN ACT

- employer must ensure that all employees who are Yukon residents are registered under the Yukon Health Insurance Plan and must pay premiums on their behalf, unless employees are registered with a other health insurance plan.

Health Services, Health and
Human Resources.

HISTORIC SITES AND MONUMENTS ACT

- companies and groups operating or working in proximity to historic places should note the terms of the Act.

(from November 1, 1981)
Tourism, Heritage and
Cultural Resources

LEGISLATION

REGULATORY APPROVALS

ADMINISTERING DEPARTMENT

HIGHWAYS ACT

Highways and Public Works

- licence or letter of approval required to maintain or construct a road on public lands (includes access to or from a Yukon highway); overload and oversize permits required to operate vehicles on Yukon highways.

LABOUR STANDARDS ACT

Labour Services, Consumer and Corporate Affairs.

- application must be made to Labour Standards Advisory Board to vary standard hours of work or days of rest; (workers employed under a collective agreement are exempted from this provision).

LANDS ACT

Land Office, Municipal and Community Affairs.

- use of Commissioner's Land is authorized by a special permit, issued following consultation with department.

MINING SAFETY ACT

Mines Inspection Branch, D.I.A.N.D.

- letter outlining project, location, timing, etc. is required before commencing operations; regulations set out in consultation between proponent and chief mines inspector.

MOTOR VEHICLES ACT

Public Utilities Administration Board.

- companies using vehicles on Yukon Roads should note licensing tariffs and vehicle equipment regulations.

MUNICIPAL ACT

Community and Municipal Services, Municipal and Community Affairs.

- required approvals under this ordinance would come into effect in event that development becomes an incorporated community; the municipality would be responsible for implementing pertinent regulations under the Area Development Ordinance.

LEGISLATION

REGULATORY APPROVALS

PARKS ACT

- lands can be set aside, appropriated and designated for parks. These can include preserves, historic parks, and natural environment parks among other classifications.

ADMINISTERING DEPARTMENT
Renewable Resources.

PARTNERSHIP ACT

- partnerships or companies using trade names must register with department within 60 days of commencing operations in Yukon.

Corporate Affairs, Consumer and Corporate Affairs.

PUBLIC HEALTH ACT

- permits and approvals required under regulations concerning private sewage disposal, camp medical care, sanitation of camps, and sanitation of eating and drinking places.

Medical Services Branch,
Environmental Health Division,
Health and Welfare Canada.

SCIENTISTS &
EXPLORERS ACT

- licence required to carry out scientific or exploration work in Yukon of a non-political or non-commercial nature.

Heritage Branch, Tourism, Heritage and Cultural Resources.

TRANSPORT PUBLIC
UTILITIES ACT

- companies or individuals wishing to haul goods within Yukon must make application to the Transport Public Utilities Board.

Motor Vehicles, Consumer and Corporate Affairs.

TRAVEL FOR MEDICAL
TREATMENT ACT

- employees must be registered under the Yukon Health Insurance Plan to receive benefits provided by this Act.

Health Services, Health and Human Resources.

WORKERS' COMPENSATION
ACT

- all employers must register with Workers' Compensation Board within 10 days of commencing operations in Yukon; standards set out in accident prevention and first aid regulations must be followed.

Workers' Compensation Board.

YUKON ACT
(Yukon Archaeological
Sites Regulations)

- to conduct archaeological studies in Yukon, a written comprehensive summary of proposed project must be submitted to department; issuing of permit based on recommendations of Inter-Departmental Committee, Archaeological Survey of Canada, National Museum of Man, Ottawa, as well as approval by Deputy Minister.

Heritage Branch, Tourism, Heritage and Cultural Resources.

APPENDIX B

A PRELIMINARY IDENTIFICATION OF
SOME INTRAGOVERNMENTAL AND EXTERNAL
INFORMATION REQUIREMENTS REGARDING
NORTH YUKON HYDROCARBON
EXPLORATION AND PRODUCTION

Two sets of information requirements are listed in this Appendix as examples of the types of data and material the Government of Yukon will need in order to take an effective role in the different aspects of Beaufort development.

The first set of requirements has been identified through an interdepartmental review of areas and issues of importance to our Beaufort planning.

The second set of information requirements was generated through an examination of the Draft Guidelines for the preparation of the Beaufort Sea Hydrocarbon Production Proposal. It illustrates the topics addressed in the Environmental Impact Statement that will be of interest to us.

As has been mentioned, these lists of requirements will grow and be added to. Answers to the many questions posed will come from a variety of sources, including industry, the federal government, and various departments within the Government of Yukon.

REQUIREMENTS

1. ENVIRONMENTAL

- The government of Yukon requires identification of proposed projects in relation to major water bodies, communities, transportation routes and any other resources or developments of regional significance that would be affected by the proposed project.
- The Government of Yukon requires identification of proposed projects with the use of maps and map coordinates of both the preferred site location and any alternates, noting relevant natural features and land uses located on the sites and in adjacent areas.
- The Government of Yukon requires a description of, and plans showing, the facilities required for the construction and operation of proposed projects, including stockpile site., camps, sewage lagoons, access roads, burrow pits, etc.
- The Government of Yukon requires an indication of the origin, type and volume of raw materials to be utilized in development, and the methods of transporting the resources required. Consumption of the resource over the duration of the undertaking and for peak periods of operation, as well as a description of the methods of transporting and/or storing of any products resulting from processing, is also required.
- The Government of Yukon requires an identification of physical and chemical properties, volumes and discharge rates of any solid, liquid and gaseous wastes, including proposed methods of treatment, disposal and/or containment.
- The Government of Yukon requires an identification of any special problem areas or safety hazards expected as a result of development, as well as an outline of contingency plans.
- The Government of Yukon requires a description, if known, of any special biophysical characteristics of a development site and methods planned for mitigation if necessary.

2. SOCIO-ECONOMIC

- The Government of Yukon requires a description of plans to use goods and services competitively produced or provided from within Yukon.

- The Government of Yukon requires an estimate of the number, duration and types of jobs provided directly by any undertaking in all phases of development.
- The Government of Yukon requires comments on the source and characteristics of expected workers, as well as on training, local hire, skills required, opportunity measures, hiring practices and union affiliations.
- The Government of Yukon requires a description of the types and quantities of products, if applicable, and estimates of annual outputs over the life of a proposed project (in units of dollar value and volume).
- The Government of Yukon requires a description of new or additional government funded services that may be required to be provided as a direct result of a proposed project.
- The Government of Yukon requires comments regarding the likely local, regional and national reaction, if any, to a proposed project.
- The Government of Yukon requires a description of any uses to be made of communities adjacent or near to a proposed project.
- The Government of Yukon requires a summary of the net costs and benefits which would accrue to Yukon as a result of a proposed project.
- The Government of Yukon requires a description of plans to land or utilize in Yukon any extracted petroleum or mineral resources where it would be technically and economically feasible to do so.

3. GENERAL

- The Government of Yukon requires a description of the alternatives and options for development that had been explored, and reasons why they were discounted in favour of a proposed project.
- The Government of Yukon requires a description of any ancillary or associated developments such as temporary work camps, permanent housing, road access, burrow pits, pumping stations, etc., as well as comments on the likelihood of a proposed project generating additional development in the area.

4. LABOUR

- Information is required on characteristics of Yukon's available supply of labour.
- An overview study is required to identify options and possible directions for Government of Yukon involvement in training residents for the Beaufort project.
- A study on local labour supply for the Beaufort project is required.
- Additional resources could be required in the areas of training, manpower delivery services, and inspection services relating to occupational health and safety and employment standards obligations.

5. LAND USE PLANNING

- The Government of Yukon requires direct input toward all stages and levels of land use planning in the northern Yukon, as well as the funding and expertise to provide this input.
- Topics that will be addressed and defined in early stages of the planning exercises will include:
 - Park boundaries and legislation related to Territorial and National Parks.
 - Management programmes for the protection of wildlife populations and habitat.
 - procedures to allow current users of the land to maintain their traditional lifestyle under the laws of general application and to participate in the management regime.
 - the delineation of transportation corridors, both on-shore and off-shore.
 - the description of the rationale for land reservation.
 - descriptions of the methods designated to preserve sites of historic significance.
 - the development of a forum for public participation and consultation through regional planning processes.
- A considerable amount of research data exists and will need to be maintained and updated regarding

- Polar Bear maternity denning.
 - the critical habitat of Grizzly Bears.
 - Grizzly Bear natality rates.
 - the wolf population status.
 - the status and critical habitats of the northern Dall Sheep population.
 - the movements and winter habitat of northern Moose populations.
- A monitoring programme needs to be maintained regarding:
- the annual productivity.
 - biannual census, and
 - harvest estimates of the Caribou herd.

A systematic inventory of northern furbearers is critical prior to permitting other forms of land use.

A research and monitoring programme on birds of prey in the northern regions of Yukon is an extremely important component of the Government of Yukon's wildlife work. This programme will need to be intensified and expanded in the case of any development on the north slope.

AREAS OF CONCERN - BEAUFORT SEA HYDROCARBON PRODUCTION PROPOSAL

1. CONSTRUCTION MATERIALS AND SERVICES

- quantities, timing and method of acquisition
- local business opportunities
- capability and opportunities for local businesses to take part
- effect on levels, types and costs of services provided to communities.

2. MANPOWER REQUIREMENTS

- numbers, types, skills and timing
- effect on local labour force (duration, location and numbers on jobs, etc.)
- effect on manpower required by existing businesses, institutions and traditional activities
- effect on local labour force income levels and distribution, and degree to which this may change lifestyles and economic activity
- access by northerners to job opportunities
- adequacy of training opportunities available to northerners
- effect of union involvement on local employment and business opportunities.

3. SERVICES AND FACILITIES

- air traffic requirements associated with development
- effects on community social and institutional services (ie. health care, social assistance programs, police and fire protection, recreational facilities, schools)
- effects on community physical services (ie. housing, water supply, sewage and solid waste disposal, roads, power generation and distribution)
- effects on local and regional transportation facilities services

- location, size, duration and services of construction camps, operational camps, staging areas
- operation and maintenance of on-shore facilities (ie. oil and gas storage, dry dock, ship mooring and transfer, housing, roads, airstrips, water supply, waste disposal)
- abandonment of equipment and facilities
- traffic projections on temporary and permanent access roads, etc.
- effect on community energy supply and cost.

4. SOCIAL AND CULTURAL PATTERNS

- effects of a major employment base away from the communities on family and community stability
- effects on community quality of life, life styles and social patterns, and cultural aspirations of northerners
- effects on social stability, alcohol and drug problems, crime and violence, marital and family problems, health problems
- effects of dependence on a wage-based economy resulting from large-scale development, as opposed to a more traditional hunting and trapping based economy
- effects on short and long term population dynamics
- effects on areas of archaeological, historical or cultural importance.

5. LAND AND RESOURCE USE

- effects on current or projected land use management plans
- development-related short and/or long term land use needs near communities which could affect future land use planning
- short and long term effects on the renewable resource base
- potential for competition between developments and local needs for non-renewable resources in short supply or difficult to obtain.

6. ENVIRONMENT AND WILDLIFE

- proposed methods for handling and disposing of gas obtained during oil production
- proposed methods for treatment and disposal of industrial water and produced waters
- storage, treatment and disposal of waste or toxic substances used or generated during operation and maintenance phases
- sources of water and uses to which it is put
- expected quantities and characteristics of debris, effluents and emissions, including noise.
- reclaiming and stabilizing of abandoned areas.
- inventory of marine (polar bears) and terrestrial wildlife.
- proposed methods of mitigating the effects of a major marine oil or gas spill, or an accidental discharge of produced waters, on wildlife.
- proposed methods of mitigating the effects of a major oil or gas spill, resulting from the rupture of an overland pipeline, on wildlife.
- effects of large-scale dredging programs or off-shore operations (ie. ice breaking) on marine wildlife (polar bear)
- effects of on-shore construction and operation activities (ie., pipelines) on wildlife.
- effects of improved access and increased human populations on wildlife, due to greater recreational and commercial hunting.

7. EMERGENCY AND PROTECTIVE MEASURES

- operational, surveillance and maintenance practices for over-land pipelines to southern markets.
- drilling and production systems-certification and inspection requirements, performance history, capacity, blow-out prevention equipment and procedures, design against environmental threats.
- risk analysis and possible future fail safe devices.
- government responsibility centres and contingency plans in case of disaster.

APPENDIX C

NAMES, DEPARTMENTS, AND AREAS OF CONCERN
OF SOME CONTACT PEOPLE IN THE
GOVERNMENT OF YUKON

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Colin Heartwell	DEPT. OF ECONOMIC DEVELOPMENT & INTERGOVERNMENTAL RELATIONS - Economic Planning and Development	(403) 667-5461
John Lawson	DEPT. OF CONSUMER & CORPORATE AFFAIRS - Corporate Matters	(403) 667-5225
Tim McTiernan	DEPT. OF ECONOMIC DEVELOPMENT & INTERGOVERNMENTAL RELATIONS - Socio-economic and Research Issues	(403) 667-5722
Bill Oppen	DEPT. OF ECONOMIC DEVELOPMENT & INTERGOVERNMENTAL RELATIONS - Social, Cultural & Policy Issues	(403) 667-5297
Dale Perry	DEPT. OF TOURISM, HERITAGE & CULTURAL RESOURCES - Heritage resources	(403) 667-5363
John Phillips	DEPT. OF HEALTH & HUMAN RESOURCES - Social programmes and health	(403) 667-5719
Gordon Steele	SECRETARY TO COMMITTEE ON PRIORITIES, POLICY AND PLANNING	(403) 667-5877
Ken Smith	DEPT. OF EDUCATION - Training and Manpower	(403) 667-5140
Dave Gairns	DEPT. OF MUNICIPAL & COMMUNITY AFFAIRS - Municipal Affairs and Local Government	(403) 667-5636

POOR

QUALITY

ORIGINAL